

144
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DYNAMICS OF SUSPENDED SEDIMENT PLUMES IN LAKE ONTARIO

Edward J. Pluhowski
U.S. Geological Survey
Rm. 312, Washington Bldg.
Arlington Towers
Arlington, Virginia 22209

(E73-10493) DYNAMICS OF SUSPENDED
SEDIMENT PLUMES IN LAKE ONTARIO
Progress Report, 1 Jan. - 28 Feb. 1973
(Geological Survey) 3 p HC \$3.00

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Type 1 Progress Report for Period
1 January 1973 - 28 February 1973

Prepared for:

Goddard Space Flight Center
Greenbelt, Maryland 20771

Publication authorized by the Director, U.S. Geological Survey

Type 1 Progress Report

ERTS-1

a. Dynamics of Suspended Sediment Plumes in Lake Ontario

ERTS-1 Proposal No. L 342-4

b. GSFD ID: OM 058

c. Statement and explanation of any problems that are impeding the progress of the investigation.

a. None

d. Discussion of the accomplishments during the reporting period and those planned for the next reporting period.

Ground truth was obtained along the lake's south shore between Oswego and Rochester on February 14-16, 1973. Ground level 35 mm photographs were taken to show ice conditions at the mouths of the Oswego and Genesee rivers. A heavy overcast prevailed at the time so that it is doubtful whether useable imagery will be obtained. Much of the period February 20-28 was spent preparing a paper for the upcoming NASA Symposium on March 5-9, 1973.

A trip will be made to the Stanford Research Institute March 19-23 to enhance imagery on their Satellite Image Analyzer. Ground truth will be obtained during the April 10-12 overpass of the satellite at a time of high flow on both the Oswego and Genesee Rivers.

e. Discussion of significant scientific results and their relationship to functional applications or operational problems.

Owing to the normally heavy cloud cover over the lake during winter, just one ERTS frame was received during the report period. This imagery, obtained January 29, 1973, shows that the highly turbid waters from the Welland Canal and Port Dalhousie harbor commonly seen during the shipping season were not in evidence. Instead, only a broad band of slightly turbid waters extending about 2 to 3 miles into the lake is visible from just west of Port Dalhousie (the left edge of the frame) to the Niagara River outlet. A broad band of altostratus clouds east of the Niagara River precluded study of nearly all of the New York shoreline.

Category designation 4D, 5H, 7C

- f. A listing of published articles, and/or papers, pre-prints, in-house reports, abstracts of talks, that are released during the reporting period:

None

Director's approval was received for publication of the paper "Remote Sensing of Turbidity Plumes in Lake Ontario" in the Survey's Journal of Research.

- g. Recommendation concerning practical changes in operations, additional investigative effort, correlation of efforts and for results as related to a maximum utilization of the ERTS system.

None

- h. A listing by date of any changes in Standing Order Forms:

January 31, 1973

- i. ERTS Image Descriptor forms:

In preparation

- j. Listing by date of any changed Data Request forms submitted to Goddard Space Flight Center/NDPF during the reporting period:

January 19, 1973.